

**Appl. No.** : **09/577,449**  
**Filed** : **May 24, 2000**

### **Remarks**

Reconsideration and allowance of the above referenced application are respectfully requested.

Claims 26, 37 and 46 stand rejected under 35 USC 112, first paragraph, as allegedly failing to comply with the written description requirement. This contention is respectfully traversed, since original specification page 7 line 17 - page 8 line 2 clearly describes entering a value that selects a code from within the biometric information.

Specifically, page 7 lines 17 describes how the user can enter a code. This embodiment enters value 22 (page 7 line 21) while the finger is in the reader. This value is then used to obtain the proper code from the biometric information.

Clearly, therefore, the specification does support receiving information known to the user. In order to obviate any confusion from the word "code", this has been changed to --value-- in each of claims 26, 37 and 46. Since the word --value-- is clearly used in the specification page 7-8, this should obviate the rejection.

Claims 26-31, 33-39, 41-47 stand rejected over Bjorn in view of Hillhouse. Claims 32 and 40 stand rejected over Bjorn/Hillhouse/Takhar. Claims 26, 37 and 46 have each been amended to emphasize their patentable distinctions. Moreover, applicant has amended many of the dependent claims to further emphasize their patentable distinctions.

In addition, new claims are added herein, directed to the subject matter disclosed in the specification that requires determination of an average of values within

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the biometric, and comparing current values with the average and using the comparison. This is described, for example, on page 6 of the specification as well as in other locations.

Bjorn discloses a system which carries out cryptographic key generation using biometric data. In Bjorn's system, a user's biometric (fingerprint) is used, features are extracted, and those features are hashed to generate a cryptographic key. See generally figure 6 which shows the flowchart of operation. This cryptographic key is then used as a certificate see figure 7. A specific way in which the values are obtained is shown in figure 9 of Bjorn, where different features in the fingerprint are extracted and used to form the values. Many of the ghost points such as 930 are assigned an orientation. The orientation is based on these parameters, for example, the ghost points are used to determine those features which may be reveal false minutae. See column 6 lines 30-50.

The patent office admits that Bjorn does not teach using a "value" as claimed.

The secondary reference to Hillhouse discloses securing a cryptographic key. Hillhouse describes how encryption key data can be ported between systems see generally column 6 beginning at line 20. A user has a key file, and a cryptographic key is then authenticated using an authentication method which can include biometric authentication see column 6 lines 27-34. This forms a secured cryptographic key. The point of this is that the automatic authorization method is stored associated with the key data. See generally column 6 lines 53-55. The user can easily obtain access to their key by entering their authentication information.

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Column 7 lines 28-30 explains that there can be different authentication methods, including a password. An embodiment described column 7 lines 46-52 requires the user to know the order of authorization methods before the value is obtained.

As amended, each of claims 26 and 37 define a totally different feature, specifically that the value is used to identify a portion within the biometric. The hypothetical combination of Bjorn in view of Hillhouse might use a Bjorn type system of determining a biometric along with a Hillhouse type system of determining passwords and other characteristics to verify and identify the user. Claims like claims 26 and 37 reduces the problem by using the entered information to select only a portion of that biometric to be verified. This is very different than anything that is done by the hypothetical combination of Bjorn in view of Hillhouse.

Bjorn uses a biometric to form a key. This key is sent to a certificate authority, and used as a certificate. Hillhouse uses a biometric key, but also verifies the biometric using additional information. Nowhere, however, is there any teaching of the synergy, where both the biometric in the code are used together and where the code is used to obtain a selection of the biometric. A portion of the biometric that is selected becomes a part of the selection process. Instead of making the selection process more complicated as is done in Hillhouse (which requires multiple layers of authentication), this system selects a portion of the biometric. The selected portion and the knowledge of which portion is selected becomes an important part of the feature.

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Claim 46 defines a different feature. According to claim 46, different parts of the code are obtained from different references.

The dependent claims should also be allowable. Claims such as claim 44 define that different parts of the code are obtained from different biometrics. In rejecting claims 35 and 44, the patent office refers to Bjorn's column 4 lines 4 -7. This cited section only refers to fingerprints, however. With all due respect, everything within Bjorn refers to a fingerprint. There is no disclosure of forming a key using multiple different parts. Certainly once the part is obtained, Bjorn discloses extracting many different features, see column 3 lines 26-36. However, there is no disclosure of forming the key from different body parts. Therefore, dependent claims 35 and 44 should be allowable for these reasons.

The remaining dependent claims should be allowable for analogous reasons.

In rejecting claim 32, the patent office has cited the additional reference to Takhar. Takhar discloses a fingerprint identification system in which the fingerprint may be stored using an adaptive technique. Takhar uses the word "ratio", see for example column 6 lines 13-15 and 22. However, the ratio is used to determine the proper light source angle to obtain a constant and consistent scan each time. Column 26 lines 7-10 describe setting the scanning light source, in a way so that "a self-regulating adaptive technique for normalizing ridge to valley 1:1 width ratio" is applied. This is a form of making the scan consistent from image to image. Takhar does not disclose using ratios in processing a biometric scan.

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Specifically, claim 32 requires that the forming forms information that is independent of absolute dimensions.

Takhar does not form information independent of absolute dimensions; rather it uses this technique to determine consistent scans. For these reasons, claims 32 and 40 should be independently allowable.

Newly added claim 48 includes similar limitations to those discussed above with respect to claim 26 and should be additionally allowable for that reason.

Newly added claim 49-50 specify that the processing without determining absolute dimensions is done using averages. This should obviate the rejection on that basis.

For all of these reasons, each of the claims should be allowable.

If the Examiner believes that communications such as a telephone interview or email would facilitate disposal of this case, the undersigned respectfully encourages the Examiner to contact the undersigned.

Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with me concerning any subject matter of this application by electronic mail (using the email address [scott@harrises.com](mailto:scott@harrises.com)). I understand that a copy of these communications will be made of record in the application file.

It is believed that all of the pending claims have been addressed in this paper. However, failure to address a specific rejection, issue or comment, does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above are not intended to be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been

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expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Therefore, and in view of the above amendments and remarks, all of the claims should be in condition for allowance. A formal notice to that effect is respectfully solicited.

Please charge any fees due in connection with this response to Deposit Account No. 50-1387.

Respectfully submitted,

Date: 3/30/08

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